

THE NAVAL SAFETY CENTER'S AVIATION MAGAZINE

approach

March 1999



**Meeting the Thunderbirds
Eye to Eye**

**Luck's Got Nothing
to Do With It**

Not Everyone Survives

inside approach

March 1999
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On the cover

RAdm. R.E. Besal
Bill Mooberry
John G. Mahoney
Derek Nelson
LCdr. Mark Enderson
Approach Staff
Peter Mersky
Laurinda Minke
John W. Williams
Ginger Rives

Comments and
Contributions

Homepage address
NAVSAFECEN BBS
Postmaster

The Naval Safety Center's
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A C-9B of VR-57 makes its approach.

Photo by LCdr. Chris Buhlmann
Commander, Naval Safety Center
Executive Director
Head, Media Department
Editor-in-Chief
Head, Aviation Division

Editor
Design and Layout
Illustrator
Distribution
e-mail: vrives@safecen.navy.mil
Commander, Naval Safety Center
Attn: Approach, Code 712
375 A St., Norfolk, VA 23511-4399
(757) 444-3520 Ext. 7257
e-mail: pmersky@safecen.navy.mil
www.norfolk.navy.mil/safecen
(757) 444-7927 DSN 564
Send address changes to Approach,
Naval Safety Center, 375 A Street,
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by Lt. Joe Colella

AN UNPLANNED ENCOUNTER WITH A FAST-JET demonstration team early in my career brought home an important, yet basic fact of flying: Your instructor is fallible.

We were returning from NAS South Weymouth, having flown up there to complete my day-night navigation flights. I was a student at VT-6, finishing my intermediate flight training. We took off and continued our day navigation. We landed in Charleston for gas. After we fueled and had our VFR clearance, we headed for Savannah, Tallahassee, Crestview and then Whiting Field.

Leaving Charleston, we climbed to 3,500 feet and started using ground references. After about 15 minutes, my IP said, "I've had enough of this day-nav stuff. Let's just dial up the nav aids and head home."

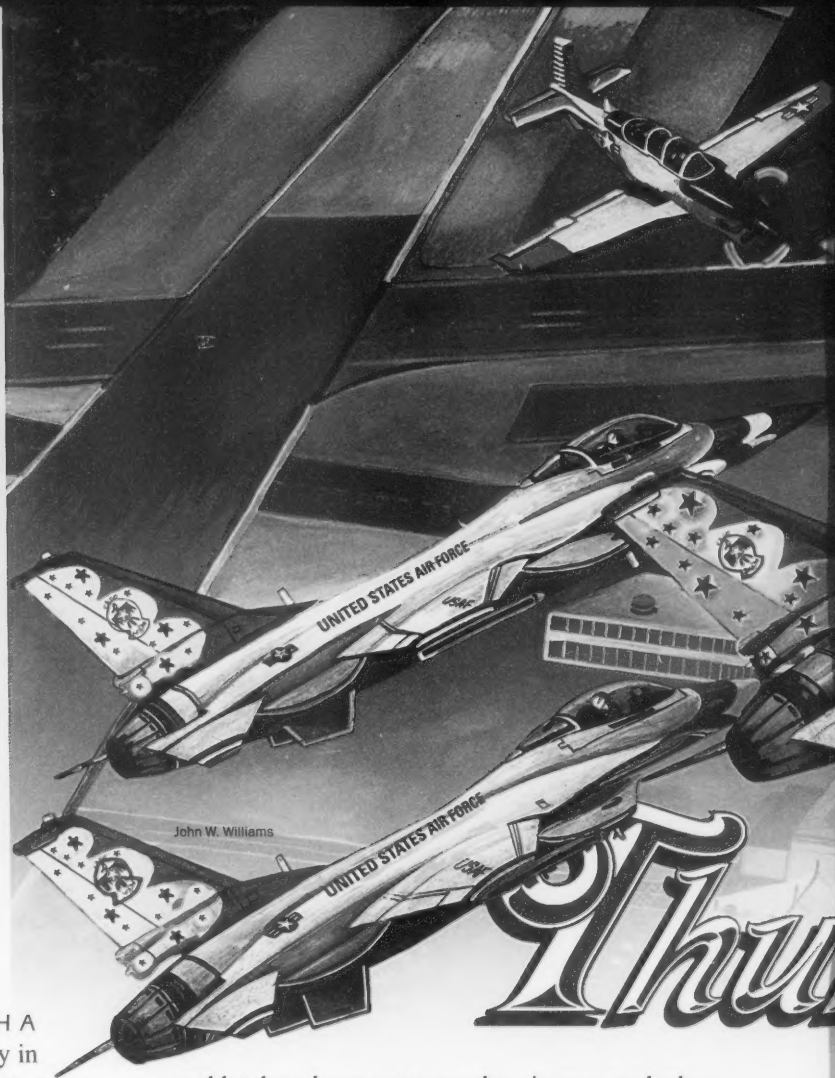
At first, I thought this was cool, and I dialed up the next nav aid on our planned route. Then we made our first mistake. The instructor decided to cut the corner and fly a more direct route back to Whiting, turning west and climbing to 4,500 feet. I started to feel a little uncomfortable. Not only did we not file this route, but we had no weather brief or notams. I suggested we call the FSS

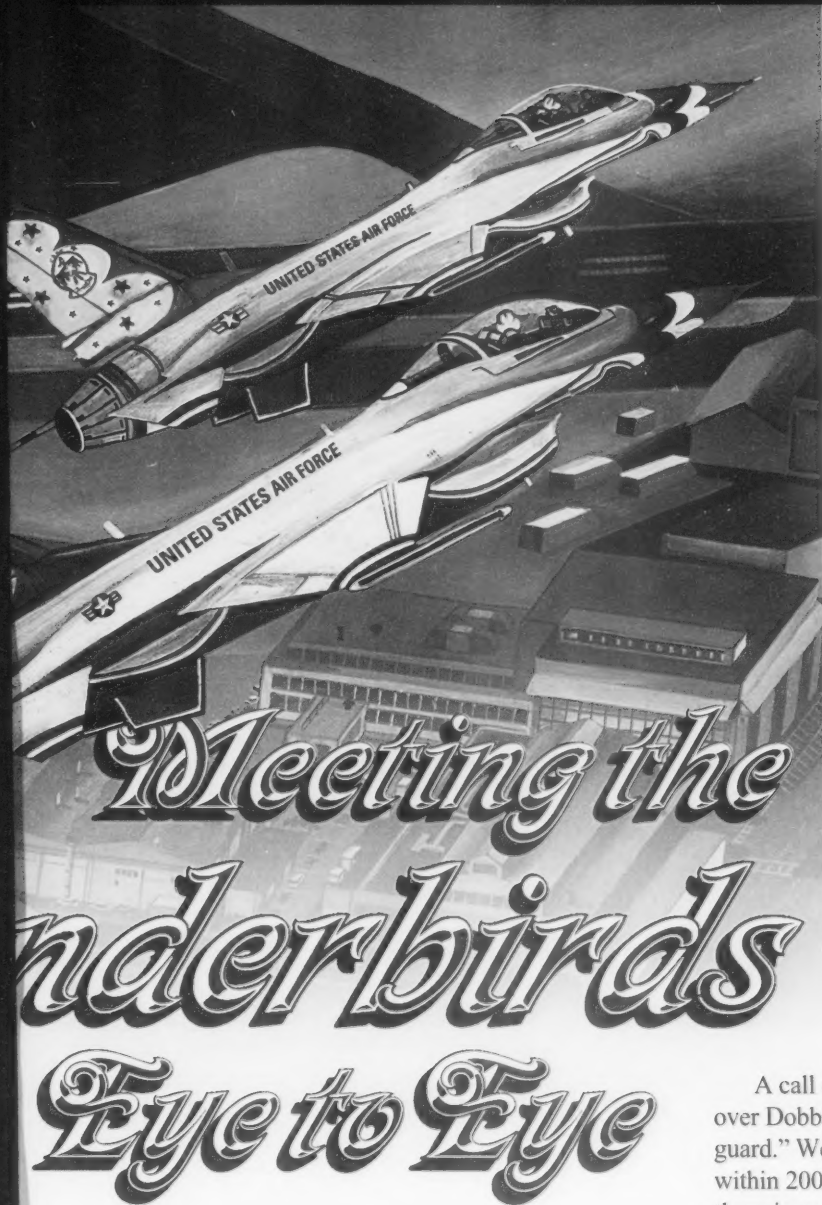
and let them know our new plans in case we had an emergency. The instructor replied that there were plenty of places to land if we got in trouble, and we would give them a call on the ground.

As I started to chart our course, the IP told me he would figure it out. I should just fly to the nav aids he gave me.

As we approached Dobbins (about 10 miles away) I said, "Sir, do you want to give Dobbins a call to let them know we're coming?" He said Dobbins was just an ATA. We were at 4,500 feet and didn't need to call them. Everything they teach us about safety in flight school had just gone out the window. I was flying with "Maverick," and he was going to do whatever was barely legal.

At 5 miles, I spotted the field and told him something looked different. He asked what it was, and I told him that there were columns of smoke coming up from the runways starting at about 1,000 feet. Again, I asked, "Do you think we should give tower a call?"





The instructor decided to cut the corner and fly a more direct route back to Whiting.

He replied "Nah, just give me the controls when we cross the field."


As I started to cross the runway at 4,500 feet, I said, "You have the controls" and showed him my hands. He took the controls and started to roll the aircraft to the right to see those columns of smoke. Suddenly, a diamond formation of jets appeared just 200 feet away at the same altitude. I swore, and the instructor rapidly rolled the aircraft level and asked, "Who the hell was that?"

I replied, "It wasn't the Blues. Looked like the Thunderbirds."

I looked down at the ground and saw thousands of people. It was 1515 on a sunny Sunday afternoon, and we were flying through an air show.

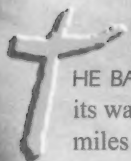
A call came over guard: "Orange and White aircraft over Dobbins, this is Thunderbird Control. Come up on guard." We did, and they let us have it. We had come within 200 feet of the Thunderbirds, and we were to call them immediately upon landing. My instructor realized that not only did we almost take ourselves out, but we could have killed many spectators on the ground. It was a very quiet flight home from there.

When we landed, the instructor hopped out before I shut the aircraft down and said, "Shut it down. I'll see you inside."

When I came in, he was speaking to a colonel on the phone. There were many "Yes, sirs." We debriefed, and he told me to keep the Dobbins incident quiet. I walked away with eight aboves for the day, but that wouldn't pay for the change of clothes I needed. I learned that if you feel uncomfortable about anything that has to do with safety of flight, press the issue until you get it resolved. 

Lt. Colella flies with VR-62.

All These Down



by LCdr. Doug Gallagher

THE BATTLE GROUP HAD JUST LEFT California on its way to the Persian Gulf. We were about 400 miles from the coast—far enough for the ship to be working blue-water operations but not too far to get to a divert if you needed one. I was scheduled as the section lead for a little 1 v 1 ACM during a 45-minute cycle, which meant there was plenty of extra gas to burn, and we were going to have a great flight.

After start-up, I taxied to cat 3. "Outstanding," I said to my RIO. "We are going to be the first ones airborne." Maybe an insignificant victory, but I will take all I can get on deployment. I was heading

down the track a couple of seconds ahead of launch time and airborne at the stroke of the hour. Nice job, Air Department.

After climbing above the clouds I headed for the CAP station. I had flown the same plane the day before, and the fuel out of the left fuel group was transferring slowly again. I was worried I was going to have a fuel imbalance in the wings when it came time to fight. My wingman was aboard by the time I got to station, and we pressed with the hop. We did the weapons checks and snapshot drill and then started butting heads.

The first engagement was a one-mile abeam set-up. The fuel split between the wings was 1,000 pounds.

"Hmmm, that's right at the limit of what I'm willing to fight with," I said to my RIO. Any more of a split and the

02

Gripes—I'm Going Flying!

potential for a departure while maneuvering at high angles of attack gets too high. My fangs were already close to the floorboard, and I did not want to waste any time in this short cycle waiting for the fuel to balance.

"I'll keep the AOA below twenty units during the fight," I said over the ICS. I probably should have waited until I knew the imbalance wouldn't get worse. The imbalance remained where it was. I had to constantly fight the plane's tendency to roll into the heavy wing during the fight, so I did not notice when the maneuvering flaps and slats failed (down gripe number one).

During the fuel and G check after the knock-it-off call, I noticed that the slats were deployed asymmetrically. The right side was all the way up while the left side was down about five degrees. OK, time to break out the PCL and go through the procedures.

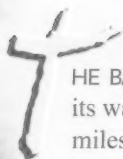
My RIO and I stepped through them, but nothing seemed to help. My wingman confirmed that the flaps were stuck similar to the slats. Great, I thought—two days into cruise and I was about to have my first emergency landing. We told the ship our approach speed would be approximately 155 knots because of our almost no-flap configuration. Recovering us at that high approach speed required 40 knots of wind-over-deck. Marshal made us last in the recovery, so the ship could achieve the 40 knots. That was OK, because it gave the fuel time to transfer out of the heavy wing.

The fuel imbalance was still causing a pronounced rolloff as we slowed down for controllability checks. I could control the aircraft down to approach speed, but I needed to deflect the stick more than I felt comfortable with.

As the fuel transferred out of both wings, I needed less and less lateral-stick deflection for the approach. Another slow-flight check after all the wing fuel had transferred, and I knew the aircraft was flyable down to 10 knots below approach speed. This meant that life was not over if I accidentally decelerated a little on the approach. However, there was a 2,000-pound split between the forward and aft fuselage fuel groups. Not a problem—just select the high aft side, and the fuel should balance. Good habits formed in my FRS days told me to keep a close eye on the transfer. If I had not been watching the fuel closely, I would not have noticed the feed tank on the non-selected forward side begin to decrease, not as designed (down gripe number two).



All These Days



by LCdr. Doug Gallagher

THE BATTLE GROUP HAD JUST LEFT California on its way to the Persian Gulf. We were about 400 miles from the coast—far enough for the ship to be working blue-water operations but not too far to get to a divert if you needed one. I was scheduled as the section lead for a little 1 v 1 ACM during a 45-minute cycle, which meant there was plenty of extra gas to burn, and we were going to have a great flight.

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The forward-feed tank supplies fuel directly to the right engine. If it went to zero, the right engine would flame out. But when I returned the feed switch to normal, the feed tank filled back up.

Now it was time to land. A quick brief with the RIO confirming that any angle of bank over 30 degrees was not my doing, and we were ready to go. When I put the gear down, I suddenly realized the approach indexers were not working (down gripe number three). The 155-knot, straight-in approach went quickly. On-and-on ACLS needles had me lined up with the island at a mile; a peek is worth a thousand scans.


After getting high on the following line-up correction, I came back down for an OK 2-wire.

Whew! Finally on deck and home at last. But what is this? The nosewheel steering decided to give up on me (down gripe number four). After we cleared the landing area, the deck crew hooked up a tow bar and tractor they pushed us back into our spot. Of course, the wings would not sweep back all the way because of the flap-slat problem. We shut down the right engine while they were towing us to keep from blowing everyone around.

After we were tied down and preparing to shut down the left engine, the aircraft suddenly lost all electrical power. Well, this elephant evidently knew it was at the graveyard and decided to give up, so all there was left for me to do was shut down the engine.

Postflight inspection revealed that the left generator had failed (down gripe number five).

My RIO and I actually made it back to the ready room without incident, and we enjoyed a tasty slider shortly thereafter.

I have heard the saying, "It ain't over til it's over," many times, but at no time was it more true than during that flight. 

LCdr. Gallagher flies with VF-31.

Luck's Got N

by Capt. Todd Rampey

I DON'T RECALL WHAT I WAS DOING when I was rousted by a squadronmate, but I'll never forget the faces of the pilots gathered in our makeshift ready room on that hot, dry desert night. The ODO was talking into his radio while the CO and three lieutenants focused their attention on the PRC-119 on his field desk. As the ODO released the transmit button on his handset, static poured from the speaker, along with the familiar voice of our AMO. He was approaching Bullion Range, one of the western-most ranges at Twenty-nine Palms. One of the majors who works in operations pulled me aside and explained what was happening.

Moments before, "Bearmat," the call sign for range control, had radioed that one of our aircraft had crashed. There were no other details. A thousand thoughts raced through



othing to Do With It

my head as I scanned the room. I sensed all of us were asking the same hard questions.

CAX 8-98 had been going smoothly. The 120-degree days turned into 100-degree nights, typical for midsummer. Most of the scenarios for the CAX were planned for daylight, which allowed our squadron to conduct its own night training. This night was high-light level and gave our younger pilots and aircrew the opportunity to gain valuable NVG experience.

Maj. Steve Ross and 1stLt. Jim Issacs were scheduled to fly a navigation route and single-ship Confined Area Landings (CALs). Their route would take them counterclockwise around the range complex, allowing for CALs in the Bullion Range.

Suddenly, the eerie silence was broken as a voice over the radio called, "I see a flare!"

The AMO had spotted one of the aircrew night flares as he approached the mishap site. The next few minutes passed slowly because radio reception with the AMO was lost as he descended toward the site.

After what seemed like hours, another transmission: "It looks like they're all right!" The AMO had climbed back to an altitude where he could relay information. He told us he could see all four of the aircrew. The crewmen weren't hurt, but their UH-1N was demolished.

The aircraft had come to rest in a gully, upright and in two pieces. I couldn't recall who told me, "I'd rather be lucky than good," as I thought how lucky the crew was to be alive. It was good we didn't have to send out another Huey to pick up survivors instead of bodies.

A few hours later, after the hospital had finished checking the aircrew, I heard what had happened that night. I soon realized how wrong I was to have assumed the crew to be lucky.

The aircrew had begun flying their navigation route as planned and had made it to the Bullion Range uneventfully. They flew to the northern edge of the range to find an area suitable for their landings and had settled on terrain that was rippled with gullies. Their chosen landing spot was perpendicular to and atop one of the 20-foot ridges that separate the gullies. First Lieutenant Isaacs was on the controls descending through 100 feet for the first approach when a master-caution light came on. Maj. Ross told the crew that the caution light was for a chip light from the No. 1 engine. The aircraft was on short final for landing, and they decided to continue the landing in accordance with NATOPs and other manuals.

Several seconds later, the aircraft was passing 30 feet above the landing zone when the unexpected occurred. Sgt. Samanns, aft crewman on the port side of the aircraft, heard a compressor stall as they passed through 40 feet AGL. The unmistakable pop of the stalling engine was quickly followed by the sound of that engine winding down. A post-mishap EI revealed that the No. 1 engine's No. 1 bearing had failed. The pilots also heard the engine, and as 1stLt. Isaacs lowered the collective to preserve precious rotor rpm, Maj. Ross took control of the aircraft. They were still 70 feet from their intended point of landing.

During FRS training, instructors demonstrate the ability of the UH-1N to maintain flight on one engine. However, slowing below minimum single-engine airspeed, normally between 20-35 knots depending on the OAT and gross weight, the aircraft descends almost uncontrollably, assuming the aerodynamic characteristics of a brick. The only way to "land" the helicopter is to make a sliding landing above minimum single-engine airspeed.

Maj. Ross was passing through 30 knots and 30 feet when the engine failed. The main-rotor

rpm began dropping, and the aircraft began a nearly uncontrollable descent. Within a couple of seconds, the Huey would hit the side of a ridge.


With only seconds to react, Maj. Ross made a hard, right turn to line up on a gully 90 degrees to his right. As the Huey descended below the ridgeline, the rotor blades began to disintegrate as they struck the sides of the gully. The skids were torn from the belly as dust and smoke filled the cockpit through the pilot's side chin bubble, which shattered as the helo hit the ground.

Somewhere in the landing, the tail boom, which was under immense strain, partly separated from the main fuselage. The helicopter came to rest 100 feet from the initial turn into the gully in an upright position.

There are those who might not consider Maj. Ross's actions remarkable. However, after visiting the mishap scene, we realized there was a bit more to contemplate. Had he turned left, the aircraft would have struck a large boulder 70 feet up the gully. Also, had he elected to continue straight, the aircraft would have hit approximately 10 feet below the intended point of landing into the face of the gully wall. Undoubtedly, either of these choices would have resulted in a much different conclusion.

Perhaps the most remarkable aspect of this situation is that Maj. Ross saw the possibilities and correctly selected the best course of action within seconds of the crash.

There was no luck with the engine failing at the worst possible moment during the approach. Likewise, there was no luck that everyone managed to survive the crash. It was Maj. Ross' quick reactions and cool thinking that allowed the entire crew to walk away from this mishap.

It's been a month since the mishap, and I still can't remember who told me they'd rather be lucky than good. One of these days, I will remember, and when I do, I will call him up and tell him how wrong he was. 

Capt. Rampey flies with HMLA-169.

by Lt. Jason Klein

IT WAS ONE OF THOSE DARK, vertigo-inducing nights in Kingsville, and I was getting ready to man up for a solo FCLP bounce hop. There was a low, overcast cloud layer at about 2,000 feet and no moon; it was so dark you couldn't see your hand in front of your face let alone a horizon. The LSO brief and man-up went smoothly until I suited up. During my survival-gear pre-flight, I found that my flashlight batteries were dead. A quick trip to the PRs and I was back in business. I didn't know how much I would need that flashlight later.

The first couple of trips around the pattern were uneventful. I was having a good time when, on downwind, all my cockpit lights flashed brightly then went out. Six hundred feet, slow, no horizon, and an overcast layer just above you is not where you want to be when you can't see your instruments.

My initial reaction was to look outside to find some reference point, but the only things I could see were the open door of the hangar and the lights from the plane in front of me, both of which were ripe for the moth affect.

I centered the lights of the plane in front of me on my windscreen and tried to adjust the cockpit-lighting rheostats to get my

lights back on. After a couple tries, I finally turned on my flashlight only to find myself slowly descending through 400 feet. I climbed back up to pattern altitude and radioed the LSO about my problem. He turned on the runway lights and told me to extend for a couple of miles on downwind to set up for a visual, straight-in approach. Because my flashlight was on my harness, I had to move my right shoulder around to focus the light on the various instruments in the cockpit—which was a little tricky.

The LSO talked me through the landing.

I learned several valuable lessons from this experience. First, when I lost my cockpit lights, I should have tried my flashlight rather than spend time messing with the rheostats and looking outside where there was no horizon. I could have gotten much farther out of safe flying parameters had I waited longer to turn on my flashlight.

Second, I should have called the LSO right away. A trained eye on the ground can keep you out of trouble.

Most important, check your survival gear before every flight. You never know when a \$2 battery might save you and a \$20 million aircraft.

Lt. Klein was flying the F-45 Goshawk with VT-22. He now flies the F-14D with VF-31.



Thank Goodness for a \$2 Battery!

Ted Carlson



Sagebrush-o-meter Checkride



John W. Williams

by LCdr. Gregg W. Allred

A DECADE HAS PASSED, I'M STILL ALIVE, and it's time to share this story. We were on a bombing detachment to El Centro. The det was going well, although the weather wasn't so great. One day, following our brief for a four-plane bombing mission, we verify the official weather forecast by walking outside and looking north toward the target area. We couldn't see that far. The visibility was so bad the horizon was obscured, and we had a hard time gauging the ceilings. So much for El Centro being a VFR airfield.

A check with the weather-guessers revealed that the weather was legally VFR, and the IPs determined we should give it a try. What did I know? Besides, bombing is a blast.

We rendezvoused and began feeling our way to the target. We managed to stumble across the run-in line and turned for the target. I was Dash 3, and by the time I broke, lead had already disappeared into what most people would call clouds. However, these clearly weren't clouds, since we were in a VFR bombing pattern.

As I reached the abeam position, I couldn't see the target, but I still had Dash 2 in sight. I trusted him to lead me to the roll-in. As I rolled in, I looked inside and set the appropriate switches so I could rain blue death. A mistake here could cost me a beer for not getting a bomb off on my first pass.


It almost cost me a lot more. As I looked back outside, something was wrong. I was looking up at a lot of sagebrush. A quick max-performance roll followed by a 6-G pull, and I was headed back up for the roll-in. At about this time, the lead IP called off-safe, off-target rendezvous because of the visibility.

"Good idea," I thought. "I hope the IP in Dash Four didn't see me."

The debrief was uneventful until the lead said, "That's about it. Any questions?" The IP from Dash 4 looked at me and asked, "How low did you go?"

I explained that I hadn't bothered to look at the radar altimeter, as my sagebrush-ometer said that I was far too low for comfort. As I waited for my "down," the debrief ended, and we wandered off in search of food.

At the time, I was so happy I hadn't gotten a down that I failed to bring out the real learning points. If the flight lead had climbed to pattern altitude before the flight broke, it would have been obvious that the pattern was unworkable. I had committed a classic mistake. Not seeing the horizon, feeling the G's from the turn, and not having enough time dedicated to an instrument scan, I hadn't detected an overbank. Bombs on target, first pass doesn't count if the bombs are still connected to your airplane.

If Dash 4 had seen me, why didn't he say anything? 

LCdr. Allred flies with VFA-27.



The Clu

by Lt. John J. Barry III

IT WAS A GLORIOUS MORNING. We had launched from Site 1 at the Atlantic Undersea Test and Evaluation Center, better known as AUTECH. A coin toss had put me in the left seat of our SH-60B, where I would be serving as the airborne tactical officer. Another new HAC was driving from the right seat. We were scheduled for two hours on the range and carried a full load of sonobuoys and a pair of Mk-46 REXTORPS. This was a good-deal flight.

Unlike most AUTECH periods, we were not being graded for a qualification. Instead, we had the entire range period to experiment and practice tactics. We also had a small wager with two of the more boisterous lieutenant commanders in the squadron on which crew would most accurately place their weapons. The prospect of O-4s taking SDO for us on our next duty day provided a strong incentive to do well.

We had briefed and rehearsed the flight from chocks to chocks, including every contingency we could think of. The aircraft was in great shape. We had tested the weapons systems about four times in the last week, and both of us had flown this airplane often. Among the JOs, this aircraft was known as a player. We were ready for anything... except, of course, for what actually happened.

We arrived at the range well before our scheduled start, which gave us plenty of time to test all the mission equipment and deploy the MAD bird. We had two sensor operators in the back for this flight, a senior aircrewman, and a new guy who was just learning the ropes. They had everything ready to go, and we went over the

game plan one more time.

The pilot positioned the aircraft so we were charging inbound exactly at the moment range control gave us "green range." I set my initial sonobuoy pattern based on the estimated position of the contact, and we arrived at datum to rain steel on our hapless victim. I was concentrating on the multi-purpose display, furiously typing on the Seahawk's less-than-ergonomic keypad, when I heard the pilot say, "Oil pressure."

I quickly looked across the cockpit at the engine instruments. At first, I didn't see anything amiss, then I saw No. 1 engine's oil pressure fluctuate up and down a couple cubes on the vertical instrument display system (VIDS).

"That's not good," I offered as my professional analysis of the situation.

The pilot turned back toward Site 1 and completed the immediate-action items for an engine malfunction while I monitored the engine instruments and set a fly-to point at Site 1.

After two more distinct fluctuations of the oil pressure, I reluctantly made the call to range control, "FINEX, FINEX. We are having an engine malfunction and are RTB at this time."

Meanwhile, the crewmen retrieved the MAD and prepared the cabin for landing. I broke out the checklist for "engine oil-pressure low," which basically consists of monitoring the pressure and temperature of the affected engine for secondary indications. Although we did not have secondary indications, we decided to treat the malfunction as worst-case. By now, the oil pressure was definitely decreasing, and the

Players's

ub

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After watching the pressure indication dip into the amber cubes a couple times, we decided we would make one pass over the pad to check for obstructions and then turn downwind. I knew there was a large radio tower next to the pad, but it was not a factor because of the wind direction.

The crewmen had stationed themselves on either side of the aircraft, ready to check obstacle clearance on the way in. By now, the oscillating pressure VIDS was triggering the No. 1 "engine oil press" caution light, and I had a finger poised over the "all stores jettison" button, wondering if I would finally find out if the system would work as well as NATOPS claimed.

The pad was clear, and we turned downwind to set up for a single-engine approach to a spot. The pilot flew a textbook profile, while I recited torques and oil pressure, and the crewmen called us clear left and right. As soon as we touched down, I pulled the throttle for No. 1 engine back to idle and then off with the fuel. After an otherwise normal shutdown and a "safe on deck" call to range control, we exited the aircraft to find the left side of the airplane covered with oil. A climb to the top of the aircraft revealed there was no oil in the sight gauge.

Continued on page 30.





The Clu

by Lt. John J. Barry III

IT WAS A GLORIOUS MORNING. We had launched from Site 1 at the Atlantic Undersea Test and Evaluation Center, better known as AUTC. A coin toss had put me in the left seat of our SH-60B, where I would be serving as the airborne tactical officer. Another new HAC was driving from the right seat. We were scheduled for two hours on the range and carried a full load of sonobuoys and a pair of Mk-46 REXTORPS. This was a good-deal flight.

Unlike most AUTC periods, we were not being graded for a qualification. Instead, we had the entire range period to experiment and practice tactics. We also had a small wager with two of the more boisterous lieutenant commanders in the squadron on which crew would most accurately place their weapons. The prospect of O-4s taking SDO for us on our next duty day provided a strong incentive to do well.

We had briefed and rehearsed the flight from chocks to chocks, including every contingency we could think of. The aircraft was in great shape. We had tested the weapons systems about four times in the last week, and both of us had flown this airplane often. Among the JOs, this aircraft was known as a player. We were ready for anything... except, of course, for what actually happened.

We arrived at the range well before our scheduled start, which gave us plenty of time to test all the mission equipment and deploy the MAD bird. We had two sensor operators in the back for this flight, a senior aircrewman, and a new guy who was just learning the ropes. They had everything ready to go, and we went over the

game plan one more time.

The pilot positioned the aircraft so we were charging inbound exactly at the moment range control gave us "green range." I set my initial sonobuoy pattern based on the estimated position of the contact, and we arrived at datum to rain steel on our hapless victim. I was concentrating on the multi-purpose display, furiously typing on the Seahawk's less-than-ergonomic keypad, when I heard the pilot say, "Oil pressure."

I quickly looked across the cockpit at the engine instruments. At first, I didn't see anything amiss, then I saw No. 1 engine's oil pressure fluctuate up and down a couple cubes on the vertical instrument display system (VIDS).

"That's not good," I offered as my professional analysis of the situation.

The pilot turned back toward Site 1 and completed the immediate-action items for an engine malfunction while I monitored the engine instruments and set a fly-to point at Site 1.

After two more distinct fluctuations of the oil pressure, I reluctantly made the call to range control, "FINEX, FINEX. We are having an engine malfunction and are RTB at this time."

Meanwhile, the crewmen retrieved the MAD and prepared the cabin for landing. I broke out the checklist for "engine oil-pressure low," which basically consists of monitoring the pressure and temperature of the affected engine for secondary indications. Although we did not have secondary indications, we decided to treat the malfunction as worst-case. By now, the oil pressure was definitely decreasing, and the

Players's

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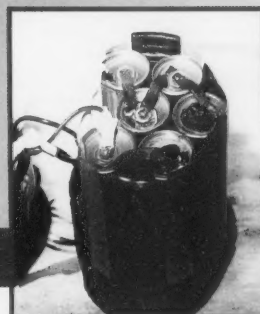
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Continued on page 30.



POP-UPS

Edited by LCdr. Mark Enderson. Contributors can contact him at (757) 444-3520 Ext. 7245 (DSN 564). E-mail address: menderso@safecen.navy.mil



LISO₂ battery pack from an SSQ-62B buoy.

Old Sonobuoy Batteries Can Be Dangerous

by George W. Wolf, Jr. and AWCS Mike Kneip



Sonobuoys are acoustic listening devices and an integral part of the undersea-warfare mission of finding, tracking and attacking underwater contacts.

Sonobuoys contain four kinds of batteries: lithium-sulfur-dioxide (LISO₂), lithium chemistry "wafer" or "AA" type batteries, sea-water-activated batteries, or thermal batteries. These batteries are all exceptionally stable, but lithium sulfur-dioxide batteries still in use beyond their shelf life (six years) can vent noxious gases.

Only two types of sonobuoys use LISO₂ batteries for main power—DICASS sonobuoys (AN/SSQ-62 series NALCs 8W71/79/82/86) and DLC buoys (AN/SSQ-86).

If you leave DICASS buoys inside an aircraft (especially helicopters) for extended periods of time, the prolonged vibration from multiple sorties can wear away the sealant on the exterior of the battery cells, causing a short, which,

in turn, makes the battery vent.

These hazardous incidents have only been verified on SSQ-62 buoys using batteries that are more than eight years old. For example, in 1993, a DICASS sonobuoy's LISO₂ batteries that were 10 years old explosively vented on the flight line in Okinawa.

"Nasty Buoys" (*Approach*, Nov '98) discussed an incident aboard an SH-60B in which a sonobuoy battery may have vented. The Naval Surface Warfare Center, Crane Division, which is the engineering field-activity for the sonobuoy program, closely monitors all such incidents.

Ensure your DICASS batteries are no more than six years old. For more information on sonobuoy issues, visit our homepage: <http://sonobuoy.crane.navy.mil>.

Mr. Wolf is the logistics manager for the Navy sonobuoy program. AWCS Kneip is the fleet liaison for the Program Executive Office, Air ASW, Assault and Special Mission (PMA-264) program.

Be Wary of a New JP-8 Fuel Additive

The Air Force and Navy have been testing an experimental additive for jet fuel. Known as Plus 100, it is designed to increase the thermal stability of aviation jet fuel by 100 degrees Fahrenheit. It promises less carbon buildup on engine parts and decreased maintenance costs, but it has also caused problems. The additive has disabled fuel filters and purifiers, allowing impurities to remain in the fuel.

The Navy began operational testing of the additive in 1996, limiting the tests to KC-130s and P-3s.

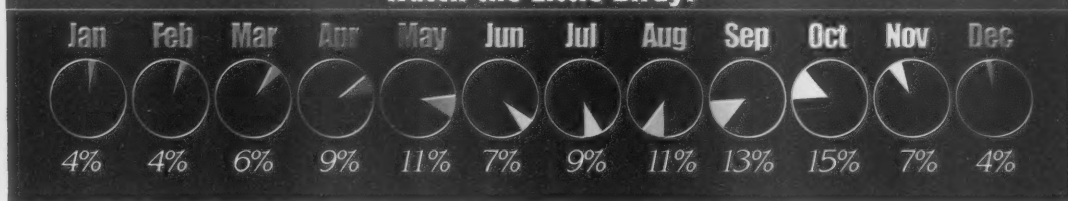
A joint Navy, Army and Air Force team is looking into the fuel-distribution system and fuel-handling problems. For now, use of the ad-

ditive in Navy and Marine Corps aircraft is not permitted without specific authorization from NAVAIR (AIR-4.4.5). Navy and Marine Corps aircraft refueled by Air Force units, either ashore or airborne, will not be given JP with the new additive (except those aircraft specifically authorized to use Plus 100 fuel).

All flight crews must ensure that when they refuel away from their home station, they refuel from vehicles labeled JP-5 or JP-8. Refueling vehicles used for handling Plus 100 fuels are clearly marked JP-8 + 100.

Points of contact at NAVAIR (AIR-4.4.5) are John Cummings and Lou Salvucci, (301) 757-3410 or 3409 (DSN 757) or fax (301) 757-3614 or 3616.

Watch the Little Birdy!



34,856 Total Bird Strikes by Month Jan. '85-Feb. '98

Birds and military aircraft have been competing for airspace since the first flying machine was built. But the advent of jets added a new variable to the equation—speed! A 12-pound Canada goose striking a jet flying at cruise speed equals 1.5 million foot-pounds of energy (the force of an African elephant stampeding over a parked car). Most aircraft are designed to withstand strikes from birds weighing a maximum of two-and-a-half pounds.

The above chart, from the Bird Aircraft Strike Hazard (BASH) team's web site, shows the predicted increase in bird strikes in the coming months. Increased volume in bird migration

routes, longer, warmer days, and the abundant food supply that accompanies spring also means you need to be ready to react to heightened bird activity along your route.

The BASH team's hyperlink can be found on the USAF Safety Center's homepage: www.afsc.saia.af.mil. It's an important tool in all flight planning. Historical data, statistics, and the bird-avoidance model (BAM) for the United States are just a few of the links available to help you assess the risk.

For more information, contact the BASH team members on the web site, or LCdr. Jimmy McLaughlin at the Naval Safety Center (757) 444-3520, Ext. 7281 (DSN 564).

ORMing Combat Search and Rescue

Combat Search and Rescue (CSAR) may be required anywhere, any time, in any weather. Training is obviously important, but one squadron recently found that the reference material didn't help determine aircrew exposure risks and required protective gear as they planned for a cold-weather CSAR training exercise. During the ORM process, they found the charts and infor-

mation didn't give enough data to assess the risks from hazards such as frostbite, exposure, or wind-chill.

New charts were recommended for inclusion in OPNAVINST 3710.7 (series). Funding for cold-weather gear was also cited as a deficiency and is an important control for lowering the risks in this type of flight regime.

POP-UPS

Edited by LCDr. Mark Enderson. Contributors can contact him at (757) 444-3520 Ext. 7245 (DSN 564). E-mail address: menderso@safecen.navy.mil



LiSO₂ battery pack from an SSQ-62B buoy.

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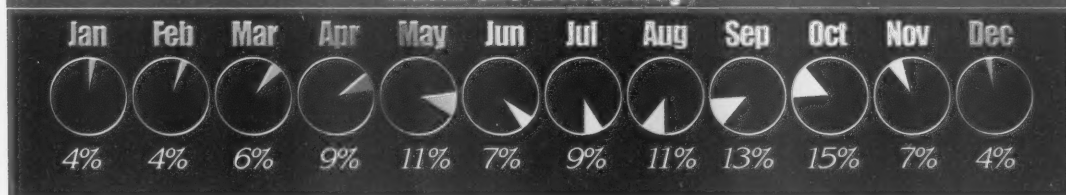
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UNCOMMANDED

by Lt. Michael Schaeffer

OPERATIONAL RISK MANAGEMENT IS PART OF OUR FLIGHT SCHEDULE, a mandatory brief item for every event and always a topic of discussion at our AOMs. But because our air wing deploys so often, we tend to become blasé about routine operations, and after only six weeks in the Sea of Japan, that was my state of mind.

I was approaching 1,000 hours in type and had recently completed my mission-commander board. Rough seas, water temperatures near freezing, and lousy weather could not shock me out of thinking I had done all this before and that it wasn't a big deal.

I was making a Case I, low-visibility recovery, typical for this at-sea period. The flight—a single-cycle USW mission looking for a diesel submarine—had gone well. Because we had recently cross-decked from *Independence* to *Kitty Hawk*, everyone was enjoying the extra deck space. Yup, landing on this boat was easy!

After following a Prowler down through the stack and breaking on interval, I lowered the gear, retracted the speedbrakes, and lowered the flaps—normal procedures for an S-3B. My COTAC started the landing checks but got only as far as speedbrakes. Our right, upper spoiler had not retracted. Cockpit indications were normal. I confirmed the left wing was clean, but the aircraft's tendency to roll right, coupled with a lot of noise from the airframe, led me to believe my nugget rightseater wasn't just seeing things.

Following NATOPS, I tried thumbing in the boards one more time. I was abeam the LSO platform now, still working hard to slow down to on-speed and trying to get back from wide abeam. All I heard on the ICS was, "No joy. It looks like it's just flapping in the breeze now."

"OK, no big deal," I replied, "let's keep it coming." Step 2 in the PCL says to turn off the Spoiler 1 & 2 switch to isolate the speedbrakes from hydraulic power. Approaching the 90, I secured the spoiler switch,



saw my COTAC do his best double-take, and heard him report the spoiler down. By this time, I had fixed my poor pattern (most of it) and was only thinking of how I was going to salvage a bad start. I was working harder than I should have been, sawing logs with the throttles, and got as far as the in-the-middle position when the stick began moving nearly full right.


"Is that spoiler back up?" I asked, my voice a little higher. I was drifting right and looking squarely at the big "63" on the side of the island. The COTAC again told me the spoiler was down, so I continued the approach. I had about five seconds of flying to do but already had in half left rudder and was running my lateral trim to the left. The control stick was touching my right leg, and I remember looking at my trim gauge thinking, "Why am I looking at this now?"

We touched down between the 1-wire and 2-wire, right of centerline. Lateral trim, normally 1.5 degrees right wing down to compensate for the refueling store, was 3 degrees left wing down.

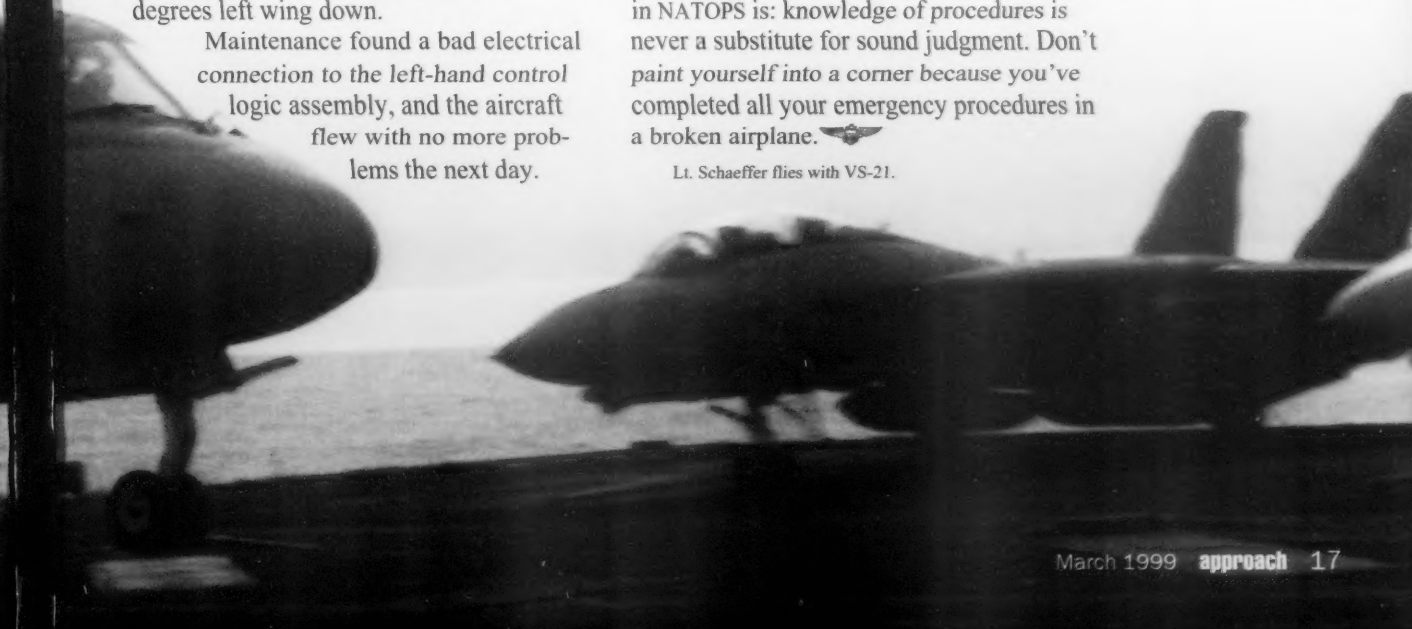
Maintenance found a bad electrical connection to the left-hand control logic assembly, and the aircraft flew with no more problems the next day.

What bothered me most about the flight (after my heart returned to normal) was my stubbornness in continuing the approach. My COTAC, though new to the squadron, raised some interesting questions in our debrief and changed the way we briefed future hops.

I had always briefed day landing emergencies in two parts. If we have a problem before the 90, depending on the nature of the emergency, we will try to troubleshoot it. After the 90, I prefer to take my own waveoff only if I'm having problems with the engine or flight controls. In this case, I didn't follow my own brief for a mandatory waveoff.

It could be argued that it was better to get the aircraft aboard, rather than keep flying with degraded flight controls, but that's not what I was thinking. I thought I could hack the landing and was more concerned with looking good around the boat. Readdressing my decision-making process illustrates just how true the preface in NATOPS is: knowledge of procedures is never a substitute for sound judgment. Don't paint yourself into a corner because you've completed all your emergency procedures in a broken airplane. 

Lt. Schaeffer flies with VS-21.



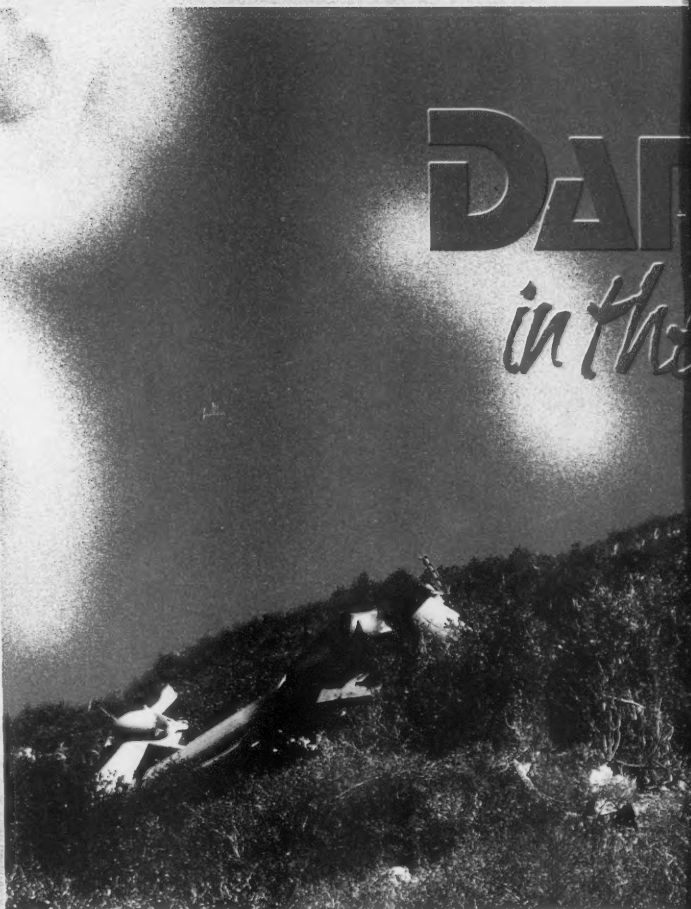
DATA in the

by LCdr. Dave Clark

WE'RE ALL FAMILIAR WITH THE HAZARDS that cause mishaps; much less attention gets paid to the hazards that result from mishaps. People have had their fingers sliced and tendons cut. Vehicles have bounded down mountains—fortunately, without drivers—and investigators have been hurt while descending a precipice. Near-misses by rattlesnakes, black widow spiders, and other creatures hiding in wreckage are all too common. No one wants to take part in a mishap investigation, but when your turn comes, here are some things to look out for.

DIRT, DUST AND PLANE BITS

People working at the site of a mishap are often immersed in charred aircraft remains, the worst of which are composite fibers. Easily carried by a breeze or stirred up by footsteps, tiny, black slivers of composite can easily become imbedded in exposed skin. Constant scratching and annoying skin pricks with your every move are sure signs you've got a problem. Be smart around the wreckage. Long-sleeve shirts, or respirators and goggles will keep these particles out of you and, most importantly, out of your eyes and lungs. Reclamation teams and permanent mishap-board members who will be the most exposed, must wear respirators and be respirator-qualified.



A little trick for those working with charred composites: wear a wet rag around your neck; this keeps the fibers from going down your back.

THINGS THAT GO BANG

Watch out for CADS, tires, fire bottles, oxygen bottles, and especially unexpended ordnance. EOD teams must safe the site and all components before anyone sifts through the wreckage. Particularly, look out for charged bottles and detonation cord. They will be unstable and need the attention of experts.

STUFF THAT CAN GO WOOSH AND HURT THE ENVIRONMENT

Just because you don't smell fuel and oils doesn't mean they're not there. Hazmat people must visit every site to assess the environmental damage and suggest cleanup methods. The area may be extremely volatile, saturated with fumes and standing fuel.

IGER Dirt


The area may be extremely volatile, saturated with fumes and standing fuel.

Soak up what you can early with absorbent pads (get them from the environmental response team), and have plenty in reserve.

LOCATION, LOCATION, LOCATION

There's no perfect location for a mishap, but some areas are obviously worse than others. Mountains, bogs and desert have their own distinctive hazards: bad

weather, rocky terrain, no roads, and poisonous indigenous critters. Dress for the location and the job. Tennis shoes that absorb liquids and chemicals and nonresistant sweat pants are a no-no.

Keep in mind that the remoteness of the site will increase the time it takes to get injured people to a hospital. Tailor your working party to the environment and hazards. 

LCdr. Clark is an aircraft-mishap investigator with the Naval Safety Center

Check the Naval Safety Center's web site for more information on mishap-investigation tools and techniques.—Ed.



by Lt. Daniel P. Martin

THE NAVY HAS MADE GREAT STRIDES in providing gyms aboard naval ships. Flight-deck jogging has increased in popularity, mainly because of a lack of space for treadmills. Overall, not a bad thing, but there are some hazards we must explore.

No-fly day? Great! Here's your chance to get out from under the fluorescent lights, breathe some fresh air, and run a few miles on the flattop. If you're like me, you jump at every chance to circle the 1,000-foot track in the middle of the ocean. I had been in CVW 5 for more than two years, and it seemed like every time we put to sea, I saw the same silly, sometimes painful mistakes all

runners make on this dangerous and unforgiving cross-country course we call the flight deck. I watched two ship's company officers throw a football back and forth while running through prop arcs. Incredible!

Before you even get up to the roof, check the air plan for any incoming CODs or airborne helos. You won't be happy if 10 minutes into your run, the 5MC is screaming to clear the flight deck. Bring along a set of earplugs just in case they're turning up an aircraft. The PR shop, maintenance control, or the flight-deck battle-dressing station will have them if you've forgotten to bring them with you.

Running in Paradise



A fall on non-skid will tear the skin from your body faster than a hungry grizzly. But the absence of non-skid, particularly around the arresting wires, will ensure a horizontal meeting with the slippery deck. Before you start running, check the condition of the deck. Did it just rain, or are plane captains washing the airplanes? Water mixed with fuel, oil, and hydraulic fluid will make it feel like you're running on an ice rink.

Tie-down chains, arresting wires and tow bars serve no purpose to a runner other than to trip him. Avoid jumping them. When you're a half hour into your run,

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you may not have the spring in your jump you think you do. The 4-wire got me one day. Scan the deck for water hoses, fuel hoses and external electrical-power cables, but at the same time, look ahead at eye level. If you've ever seen a laceration that resulted from an encounter with one of the many sharp edges on an FA-18, you'll accelerate your running scan. Sometimes, aircraft are packed so tightly on the bow that bobbing and weaving through the many obstacles up there is just too hard.

Don't run on the greasy, metal portion of the catapults. It stays slippery no matter what the condition of the rest of the deck is, and when water hits it, it boils!

The traffic flow of runners on my carrier always seemed to be counter-clockwise (most likely because naval aviators only know how to turn left.) Often, however, someone will try to run against the traffic pattern, and, invariably, you will meet them in a tight spot on the bow where a left-to-left is impossible. Don't be that guy! Run with the flow, and make it easy and predictable.

While we're on the subject of predictability, the most unpredictable person on the flight deck is the guy who is walking or running slowly in front of you. He doesn't know you are approaching from behind, and his sudden movements are sure to coincide with your move to pass left or right. Announce your intentions to pass on the left or right. If you're the one who has slowed down, remember someone might be coming up from behind.

Winds across the deck are a great way to expedite a trip to the flight surgeon or over the side. Forty knots across the deck may be fine for a flaps-up emergency recovery, but it's not ideal for that early morning jog unless you're training for a triathlon and are in need of a swim.

Here is an idea that might make running the deck a little more regular: ask your ship's CO to get ahead of PIM during the night. He can then open up the deck when operationally feasible, scheduling a posted, pre-planned window three times a week as a standard ship's routine. It won't always work, but the effort will be appreciated by all that make that sometimes-feeble attempt to stay in shape. From personal experience, anything more than 16 knots across the deck does not justify the risk. Hey—that's ORM. 

Lt. Martin flies with VFA-195.



Not Everyone

"Power. Power. Power! Eject, eject, eject!" the LSO called to a recovering aircraft. We gasped as we realized what had happened.

"Crew rig for rescue," the HAC called over our ICS, followed by, "Is there a parachute?"

"I can't believe this is happening," I thought as I took the controls and finished turning the aircraft toward the stern of the ship.

"Crew rig for rescue," I repeated over the ICS while the HAC completed the automatic approach checklist. By now, our hearts were pounding in anticipation. I know all of us were hoping the pilot had made it out. I could hear the crew chief take position at the rescue station while the swimmer finished preparing to enter the water.

The ship was moving at about 7 knots. The bow was enveloped in a thin cloud of black smoke. The situation began looking a lot worse as we crossed the wake at 100 feet and turned up the port side of the ship.

"Does anyone see a survivor?" we asked. We weren't thinking about attitude, airspeed, frequency, or power checks. Everything occurred quickly under time compression.

There was nothing visible on the port side, other than several large rafts from the ship. No parachute, no survivor. Everyone in the aircraft was talking at this point, but the radios were quiet. A quick pass down the starboard side didn't show anything in the water. We crossed the stern and saw the rafts just clearing it.

I flew a manual approach to the center of the rafts as they began to separate in the wake.

"I see a helmet!" the crew chief called just as I saw it floating in the water. What also appeared to be a single-man raft was floating about 5 yards next to the helmet. I moved aft

by Lt. Robert Pritchard

SITTING IN THE READY ROOM, I remarked to the SAR swimmer what an excellent day it was outside the ship. The sky was near-perfect VFR, and we were briefing a three-hour, plane-guard mission to cover the afternoon's CQ. This was the second to last day of the training command's detachment—T-45s for the entire time.

Our standard brief covered weather, aircraft assignments, and general operating information. I would sit in the right seat while the HAC sat in the left seat for the flight. Right seat means conducting the crew brief and flying the aircraft during a SAR.

I'm a bit long-winded in the brief and try to cover all main responsibilities of every member of the crew. Usually, this technique results in some glassy eyes and discreet yawns. Today, however, we had a strong crew, and the brief went quickly. We walked to the aircraft and manned up for the flight.

He Survives


over the spot when the crew chief called, "I see him!"

"You have verbal control," I told the chief.

"He's about five feet underwater, sir" the chief reported as we prepared to lower the swimmer. The swimmer touched the water as the pilot broke the surface with a partly-inflated LPU. We saw that he was dead.

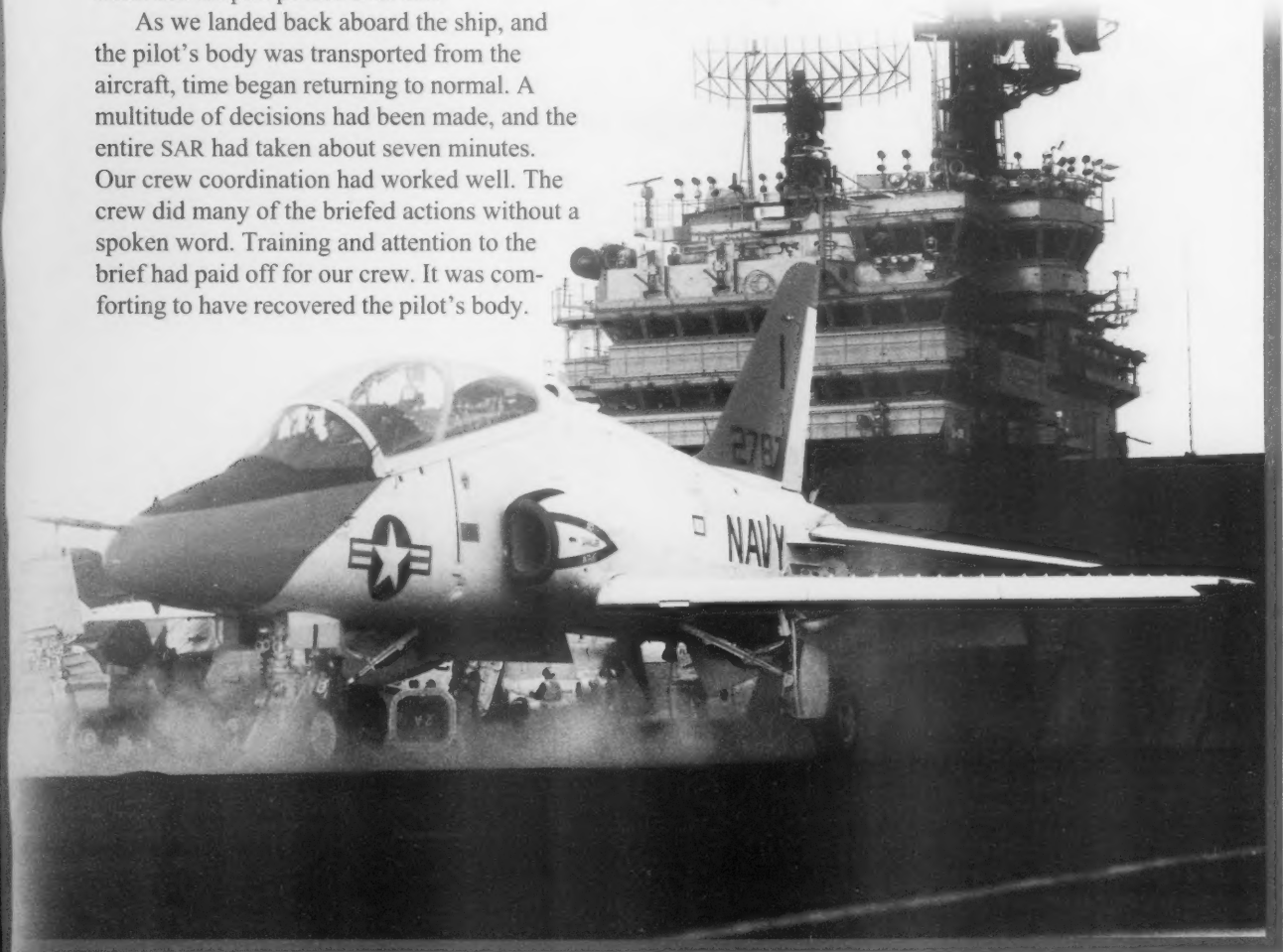
Time began to slow down. It had taken about three minutes from the ejection command to locate the pilot. A strange mixture of relief and despair passed over me.

As we landed back aboard the ship, and the pilot's body was transported from the aircraft, time began returning to normal. A multitude of decisions had been made, and the entire SAR had taken about seven minutes. Our crew coordination had worked well. The crew did many of the briefed actions without a spoken word. Training and attention to the brief had paid off for our crew. It was comforting to have recovered the pilot's body.

Training, paying attention to the brief, and following NATOPS play a tremendous part in the outcome of any emergency, even if it isn't your aircraft that's in trouble. 

Lt. Pritchard flies with HS-3.

"I see a helmet!" the crew chief called just as I saw it floating in the water.



BRAVO Zulu

BZs require an endorsement from the nominating squadron's CO and the appropriate CAG, wing commander or MAG commander. In the case of helo dets, the CO of the ship will suffice.

A squadron zipper and a 5-by-7-inch photo of the entire crew should accompany the BZ nomination. Please include a squadron telephone number so we can call with questions.



Cdr. Joe Kupcha
LCdr. John Sears III
LCdr. Bill Rossi
Lt. Brian Smith
Ltjg. Brad Sparks

VAW-117

The crew of Banger 601 launched from the USS Carl Vinson on an air-defense exercise off southern California. It was a dark, moonless night with a typical marine overcast layer from 1,000 feet to 4,000 feet. The mission went well, except the AOA stuck intermittently.

At first, the flaps remained stuck at the mission-profile setting of 10 degrees when the Hawkeye crew tried to leave station. A carrier landing in an E-2C with 10-degree flaps is not recommended unless a divert is not available, so the aircrew began working to fix the problem. The pilot and aircraft commander, Cdr. Kupcha, flew toward the ship, while the copilot, Lt. Smith, contacted marshal. The mission commander, LCdr. Sears, told the CATCC representative while the air-control officer, LCdr. Rossi, broke out the PCL. Following NATOPS, the crew freed the flaps as they approached the marshal stack.

As the aircraft entered marshal, the flight-hydraulic-low warning light illuminated. Although E-2Cs have two hydraulic systems, failure of one can cause contamination and failure of the second requires an immediate landing. The radar officer, Ltjg. Sparks, immediately investigated the forward-equipment compartment to check the flight-hydraulic reservoir. Lt. Smith and LCdr. Sears coordinated with marshal and CATCC.

Ltjg. Sparks discovered the flight-reservoir slug bottomed out, indicating that the reservoir was empty, and the crew declared an emergency. While the CATCC rep coordinated a ready deck, the aircrew used NATOPS emergency procedures to extend the gear and flaps.

More problems presented themselves when the Hawkeye slowed to approach speed. The intermittently-stuck AOA became a problem again, so approach and

paddles were told that Banger 601 would also be "no AOA."

To make matters more difficult, as the crew lowered the gear and flaps, the elevator trim stuck at zero units. The typical landing position for elevator trim is about 3 degrees up, so the pilot had to use approximately 30 pounds of force against the yoke to maintain the correct attitude.

Cdr. Kupcha flew the aircraft while Lt. Smith helped him on the flight controls and reviewed NATOPS PCL procedures for the new emergencies. LCdr. Sears told approach and the CATCC rep about the developing crisis. When they called the ball, the Hummer crew also reported flight-hydraulic failure, no AOA, and stuck elevator trim. Fifteen seconds later, they trapped with an OK 3-wire.

Postflight inspection revealed that improper servicing probably led to the empty flight-hydraulic reservoir, and the elevator-trim actuator had failed.

Sgt. Joseph Anderson
Cpl. Jeremy Echternach
1stLt. Ned Biehl
Capt. Matthew Dutkiewicz



HMM-161

This crew left MCAS Miramar for a day, VFR navigation flight as Dash 2 of a two-plane section. Capt. Dutkiewicz, the HAC and pilot at the controls, smelled smoke as he went feet wet. Cpl. Echternach, the crew chief, checked aft and reported misting hydraulic fluid coming from the utility hydraulic pump.

The gauges in the cockpit confirmed that the utility hydraulic system had failed.

As the crew of the Dash 1 helo—MajGen.

Fred McCorkle, CO of 3D MAW (now LtGen. McCorkle, DC/S for Air), and LtCol. Roger Baty, HMM-161 CO—told Miramar Tower about the problem, Cpl. Echternach recommended an immediate landing. Capt. Dutkiewicz turned the CH-46 toward shore while 1stLt. Biehl, the H2P, ran through the immediate-action steps. He isolated the forward utility hydraulic subsystems and secured the engine air-particle separators.

With smoke in the cabin and cockpit, Capt. Dutkiewicz made a precautionary emergency landing in a parking lot along the beach. Once on deck, the crew made a no-APU shutdown.

Inspection indicated that the most likely cause of the pump's failure was under-torqued cap screws backing out, causing the pump's high-pressure seal to fail.

Lt. Mark Rusnak
AE1 Robert Meyers
Ltjg. Tyler Maw



VQ-3

Immediately after the E-6 rotated, Ltjg. Maw, the copilot, noticed abnormal aileron control, which prevented the aircraft from making left turns. The aircraft commander, Lt. Rusnak, confirmed the problem, declared an emergency, and continued climbing to troubleshoot and check controllability.


He determined aileron control was normal in a right roll, but he had to use extreme force

to move the yoke left of center. Maximum left roll was limited to 5 to 7 degrees, left wing down.

AE1 Meyers, the flight engineer, and the pilots completed the NATOPS checklist for binding flight controls, but they couldn't gain more control. After checking with squadron maintenance and the Boeing tech rep, Lt. Rusnak decided to land with 25-degree flaps. He selected Tinker's runway 12, which had

a slight right-to-left crosswind that would help controllability. After flying an extended final, Lt. Rusnak landed.

Postflight inspection of the left-inboard aileron trim tab showed a screw had backed out. The screw had lodged between the aileron and the aileron trim tab, blocking movement of the port aileron and severely limiting the aircraft's ability to turn left.



Head

The Best Pilot

I WAS SITTING IN THE MEDICAL WARD getting eight stitches in my head, feeling dumb and looking even worse. How I got there and my follow-on misadventures are a prime example of allowing a good deal to override basic judgement. All because I exaggerated the importance of a trip to Poland.

It was the night before I was scheduled to take one of my squadron's brand-new FA-18s to Deblin, Poland, for an air show. I was a nugget and was really excited about this "JO good deal." I feverishly prepared for the trip, making sure everything was set. I wanted to make sure I didn't do anything stupid on my first solo cross-country. Finally, I was ready and was about to head for my rack for some much-needed sleep. Suddenly, I remembered I needed to pick up a cellular phone from CAG Ops.

Rushing out of the ready room, I ran down the passageway, leaping through the kneeknockers. It only took four or five leaps before I was on the deck. While trying to negotiate a kneeknocker at full speed, I drove my head into the top of the metal oval and wound up flat on my back. At first, I just held my head and hoped for the best, but soon I realized I was in trouble. Blood was everywhere, and my head was throbbing. I managed to get back to the ready

Rushing out of the ready room, I ran down the passageway, leaping through the kneeknockers...

first to Poland

room where my squadronmates gaped at my injured melon. My efforts to not look foolish had failed miserably.

The medics arrived shortly and brought me to sick bay. I spent the next three hours receiving a high-quality wound cleaning and eight stitches, two of which were to hold the lining of my skull together.

I left the ward and went back to the ready room, knowing it was going to take some serious work to salvage the next day's flight. I got myself together and, with the help of the flight surgeon, got my up-chit and was cleared for the flight.


After about four hours of sleep, I awoke still groggy with an eye-watering headache. But that wasn't enough to stop me. Everything went as planned until the cat shot, and that's when I realized I should not have been flying. The jolt from the stroke sent a pain through my head that was nearly incapacitating.

I recovered quickly and proceeded on my two-hour flight to Poland. Things were fine until I got to the field. The Boeing FA-18 demonstration pilot was in the middle of his practice show when I arrived. After he landed, he told me over the radio that there were a lot of media people at the field and that it would look great if I did a high-speed

break. Once again, I forgot my head wound and eagerly proceeded to the overhead.

Passing over the crowd, I snapped on the G and realized I was out of my envelope. I immediately released stick pressure and arced like you wouldn't believe. I carefully navigated to the approach end of the field and by the time I shut down my engines in the line, the pain in my cranium had dulled to a tolerable level. Over the weekend, I did a lot of explaining about why I couldn't shower and why I had a huge line of stitches across my head.

I learned a lot of lessons from my experience. First, there is no reason to push yourself beyond an obviously acceptable limit. You have to determine if you are ready to fly. In my case, I wasn't ready, but I did not recognize it until I was airborne.

Second, you shouldn't rush the details, especially on the boat. There are plenty of things that can hurt you in a shipboard environment, especially if you let your guard down. My overeagerness should have cost me a good deal; it definitely cost me some pride. In my senseless pursuit to salvage a flight, I flew under marginal conditions. Ironically, I took all those unnecessary risks for a cell phone that didn't even work in Poland. 

Lt. Briller flies with VFA-83.

A New Year's Flight

by Lt. John McGrath

WAS A NEW SERGRAD INSTRUCTOR flying the T-2C Buckeye out of Pensacola.

During one mission, part of a six-plane cross-country flight (six IPs and six SNAs), I was teamed up with a solid student to fly to our hometown NAS. Our eight-leg boondoggle up and down the Eastern seaboard spanned four or five days, during New Year's weekend, with marginal weather expected over most of the Northeast.

With explicit instructions from the Ops O to "watch the weather and come back when you need to," we climbed into our Buckeyes and launched into the New Years' Eve goo.

The first leg was uneventful, with the student doing a good job flying and navigating to Oceana. As luck would have it, the fuel pits were clobbered, guaranteeing that our departure would be so late that the field would be closed. So as a group, we decided to divert to NAF Washington, D.C., and spend New Years' Eve in Georgetown. We got up early the next morning and charged ahead.

A full-blown winter front had blanketed the Northeast, and even though the weather was still VFR at our destination, there was potential for in-cloud icing. Filing the next day, we found the weather office forecasting icing from 5,000 feet to 25,000 feet up and down the coast.

After discussing the dangers of filing through known icing, my student and I decided to file back to Oceana at 3,000 feet MSL to avoid the frozen clouds. I figured

that flying a low-altitude route among the Cessnas and Pipers would give my student a good workout switching frequencies and tuning-in TACAN stations.

With an uneventful ASR into Oceana, we shut down and went to base ops to check the weather for our leg to NAS Cecil Field, where the weather was forecast to be a balmy 80 degrees.

The forecaster lifted our spirits: no icing en route and VFR conditions upon landing at Cecil. We quickly jumped into our Buckeye and blasted off to sunny Florida. We went in the clouds soon after takeoff and stayed IMC all the way to FL390. The T-2C's tendency to dutch roll at high altitude, coupled with solid IMC, challenged my student to keep the airplane right side up.

I took the comms so he could concentrate on basic air work. As our workload increased with busy center frequencies and crummy weather, the winds aloft escaped both our scans. Our ground speed was dropping to hot-air balloon velocity as the winds shifted from a quartering tail wind to a strong quartering head wind.

We eventually broke out in the clear near Brunswick, Ga., and started our descent about 100 miles north of our destination hoping to pick up some "free" gas on the descent. Looking at our fuel, I figured to have minimum fuel on deck (SOP was 600 pounds) if we could go direct to the field for the last 80 miles or so.

ASCO

My hopes of direct routing were soon dashed, however, when we checked in with approach control. They vectored us direct to the ATC "flow point," effectively taking us 50 miles out of our way. A quick check with the tower revealed the weather to be 1,500 broken, with 5 miles visibility in rain near the field.

We decided to follow approach's vectors, assessing our fuel on deck to be just above the NATOPS limit of 450 pounds. As we passed within 20 miles of the field on a vector for sequence, I could see the airport through the scattered clouds and asked approach if I could proceed to the break. The controller tersely informed me that the field was not taking overhead traffic and that I was number nine for the PAR.

Raising my voice two octaves, I told him I was minimum fuel and needed to be vectored number one for the approach. He coldly responded to my request, "Roger,

Raising my voice two octaves, I told him I was minimum fuel and needed to be vectored number one for the approach.



report emergency fuel. You have seven min-fuel Hornets in front of you."

Trying to cover all options in my mind, I told my student to keep the aircraft "clean" until we were established on the glide slope and that we would dirty up at the last minute. By now, the controller saw fit to move us up to number four in the sequence, and we started our final approach from 5 miles with the field in sight.


At 3 miles, we lowered the landing gear, leaving the flaps up, and flew an on-and-on pass with both low-fuel lights glaring at us and the fuel gauge bouncing between 400 pounds and zero.

Passing through 300 feet and $\frac{3}{4}$ of a mile, the PAR controller gave us landing clearance and continued azimuth and glide slope calls to touchdown. Just before touchdown, the tower controller cut in and told us that our landing clearance was canceled and that we were to execute a missed approach. I immediately took the controls and turned downwind, not so gently telling the tower that we needed to land now and I was going to land on the parallel runway. The controller immediately said, "Roger, wind calm, cleared to land, check wheels down." We made an uneventful landing on the parallel and turned off within 500 feet to the transient line.

As we taxied, I asked the tower controller an obvious question: Why? He said there hadn't been enough landing separation between us and the FA-18 touching down and that their procedures forced them to cancel our landing clearance. (The Hornet had just started to turn off the runway when the clearance was canceled.) My student was understandably speechless during the taxi in and shutdown.

As the refueling truck topped us off, I calculated there was about 300 pounds of fuel in the airplane when we shut down.

Here are a few lessons my student and I learned during this trying flight. First, even though the weather is forecast to be better than what you've had all day, don't let the details like shifting winds aloft drop from your scan.

Second, the self-induced pressure to get the "X" by completing that last instrument approach clouded my judgment and prevented me from canceling my IFR clearance and proceeding VFR to a visual straight-in landing once I realized our fuel was going to be tight. My own inexperience and reluctance to deviate from the plan allowed ATC to paint us into a box that could have ended in a mishap. 


Lt. McGrath flies with VFC-12

The Players's Club continued from page 13.

We trudged inside to call the skipper.

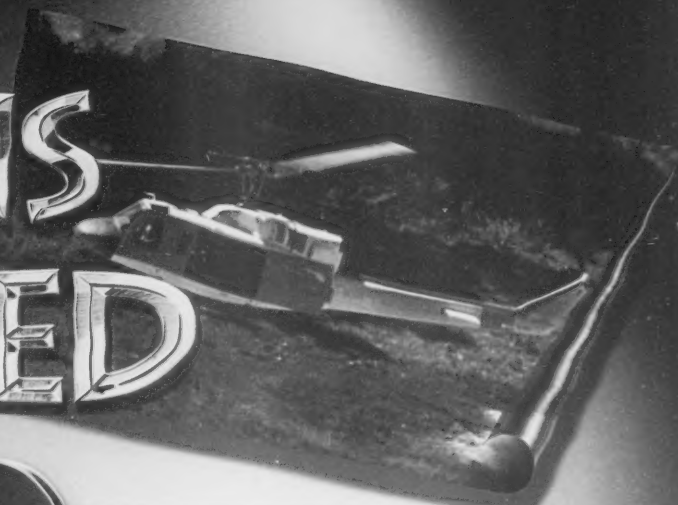
Further investigation revealed that one of the carbon seals had failed, and we had been losing oil for the duration of our short flight. Based on the small amount of oil left in the engine, the technicians estimated that the engine would not have stayed with us much longer. We had decided to make a precautionary landing at Site 2 because we did not want to pass up a safe landing site. We had briefed that we would treat all emergencies and indications as worst-case scenarios and choose the most conservative option available. The choice between an immediate landing to a spot and a delayed landing at a runway is debatable. The

decision to try a single-engine landing to a spot with a full load of fuel, full sonobuoy launchers and two REXTORPs is not.

We had discussed jettisoning the load and dumping fuel but talked ourselves out of it because we did not have secondary indications of an emergency. Our concern about overreacting to the situation (or being perceived as overreacting) influenced our decisions and caused us to unwittingly deviate from our brief. Although we landed without incident, we did not give ourselves the best margin of safety that we could have. Fortunately, the aircraft truly was a player that morning. 

Lt. Barry flies with HSL-44.

LESSONS LEARNED



Know Your Local Flying Area

by Capt. John Pitchford, USMC

AHUEY ON A SAR training mission struck power lines strung 209 feet above a narrow, winding river and crashed, killing five.

Approaching the wire span, the crew had seen a high mountain face ahead and the river curving sharply to the right. Background and foreground terrain camouflaged the power lines and the weathered, brown, wooden poles supporting them.

The power lines struck the lower part of the rotating control tubes, just above the scissors-and-sleeve assembly. Both tubes broke, severing all connections between the cyclic and collective and the main-rotor blades.

Without controls for pitch, roll, climb or descent, the Huey crashed 1,200 feet down the river from where it struck the power lines.

Of all aviation mishaps caused by human error, wire strikes are particularly tragic because they are preventable, and because the concept of see-and-avoid has long been a basic tenet of aviation.

Two and a half years earlier, a Bell 206 civilian helicopter struck power lines at the same location, killing two. When the lines were restored, the electric company decided not to mark or reroute them.

Many of the squadron SAR pilots, including those in the Huey crash, knew about the wires and the civilian mishap. The lessons learned from this mishap all have a common theme: Know your local flying area.

Lessons Learned:

1. Every helo squadron, det or unit should be aware of wires and towers in their local flying area. The best way to foster this awareness is with a master-hazard chart in the ready room. Every man-made vertical obstruction should be highlighted. Every pilot or observer should make a copy of this map to carry with him in the cockpit. When uncharted hazards are discovered, aviators should mark them on the master-hazard map.
2. In an unfamiliar area, observe the terrain carefully and fly conservatively. Do not fly at low altitude in confined terrain unless you know the area well, there's a legitimate training or mission-essential need, and you've studied the map.
3. Initial area-FAM flights for new pilots and aircrew should focus on known hazards in the area. Course rules, checkpoints and local flying SOPs are important, but wires are more likely to cause a mishap.
4. Aviation safety officers can research civil mishaps that have occurred in their local flying area. They can get information based on date, location, aircraft type and operation. ASOs at the unit or higher level can use this information to improve awareness.

Access the National Transportation Safety Board's accident investigation web site: <http://www.ntsb.gov/aviation/aviation.htm>

Capt. Pitchford is a helicopter analyst in the Naval Safety Center's Aircraft Operations Division. He covers AH-1s, UH-1s, H-57s and night vision devices.



Kill, Kill, Keep, Kill!

by Peter Mersky

A RECENT LETTER FROM THE SAFETY OFFICER of VAQ-135 asked about our publishing policy.

I'm trying to develop a safety article program, but I'm running into resistance from some members of the squadron who think it is a waste of their effort to write articles that may never be published. Do you have statistics on what percentage of the submissions are ultimately published?
—LCdr. Brian C. McCawley.

A valid concern that requires a proper answer. It's a little like being a manager choosing players for a sports team. There's a lot of talent to select from, but only a specific number of hopefuls will make the final cut.

We're limited by how many pages we print each year. We run 12-to-15 stories in our 32-page magazine, but we get hundreds of stories from the fleet. We know the uncertainty is frustrating for those who spend the time and effort to write something, only to have us either reject it outright or stash it in our files for a year. The author waits, moves on to another assignment, or forgets about it altogether.

We keep perhaps a third of submissions, and print about half of those. That's

15 to 20 percent of submissions that we eventually publish.

Approach enjoys an enviable reputation throughout the military—not just the Navy and Marine Corps. Publications from other services and aviation safety magazines from airlines and civilian agencies often reprint our material. But we couldn't exist without the participation of our readers. Your honest, exciting stories—often written from the gut—help us maintain an extremely high standard.

Some communities are more vocal than others. Our readers in HSL are solid submitters, as are the Hornet folks. Some squadrons barrage us for a few months then fade away. Some squadrons we seldom hear from, even if we ask. We'd like to see more stories from the Marines.


One of our "favorite" times is right after New Year's when squadrons scramble to nominate themselves for safety awards. Our phone rings, and an anxious ASO asks, "Can you tell me how many stories we sent you last year?" We try to respond as time permits, although our database only includes the stories we've kept, not the ones we've rejected.

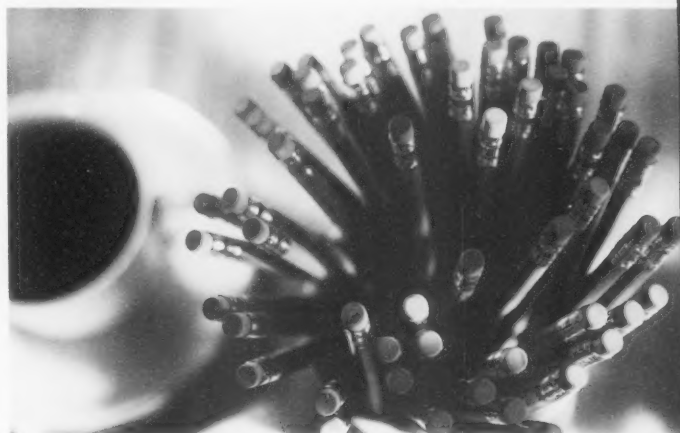
Which articles get our immediate attention? Ejection and survival experiences. Flights where emergencies put the crew, mission and aircraft in jeopardy. Experiences that involve a specific mission, not just a cross-country or fam flight. Stories that emphasize how crew coordination saved a multi-million-dollar aircraft are always at the top of the "A" list, too.

One thing that sets us apart from other military safety pubs is that our authors aren't afraid or too proud to tell how they screwed up. Their experiences prevent someone else from repeating their mistakes. That philosophy is at the heart of *Approach's* charter.

Occasionally philosophizing is OK, and we get a few such stories from senior aviators. But these are not always usable and frankly, our target audience (O-1s to junior O-4s) finds them boring. We certainly welcome articles from senior readers, who couldn't have made it to commander or

lieutenant colonel without a few *Approachable* (sorry) experiences. Tell us about those, skipper.

Naval aviation generates an inexhaustible source of subjects and experiences. So, even though we can afford to be picky, keep sending those stories. We need 'em and we need you. 



On Cat 1

Coming Attractions for April

● **But, Sir, the Helicopter Really Crashed!**

● **I Can Land This Baby, but Where?**

● **A Midair... On the Ground?**

BROWNSHOES IN ACTION COMIX

"The kind real aviators like"

TEAMWORK

In The Spotlight

Ops O, I don't have a tissue. Would you mind if I used the sleeve of your flight suit?

My pleasure, Skipper!



In the Ready Room...

Anybody got the answer to #2 on the closed book?

200 feet above current altimeter setting...

460 feet...

The Hadji Intersection...

The bottom third of the thunderstorm cell...

As filed...

Last assigned...

Red, right, returning...

At Instrument Ground School...

and in Wardroom One...

Tell us again how you invented the compressor stall, Test Pilot Dave.

Why, certainly. I just pulled-HAACK! AAKKI!

Test Pilot Dave is choking!



I didn't go to test pilot school, but I do know the Heimlich Maneuver.

You save the choking victims: I'll write the really detailed MAFs. That's teamwork!

Prooo!

Single Cheese Slider®



by Cdr. Ward Carroll

